

L Number	Hits	Search Text	DB	Time stamp
1	25	(use with (telephone or phone)) same (motel or hotel)	USPAT	2002/05/23 15:03
2	3	((use with (telephone or phone)) same (motel or hotel)) and (fee or surcharge or sur-charge or (sur adj charge))	USPAT	2002/05/23 15:04
3	245	(use with (telephone or phone)) and (motel or hotel)	USPAT	2002/05/23 15:04
4	50	((use with (telephone or phone)) and (motel or hotel)) and (fee or surcharge or sur-charge or (sur adj charge))	USPAT	2002/05/23 15:13
5	299	(guest same (fee or charge or surcharge or sur-charge or (sur adj charge)))	USPAT	2002/05/23 15:14
6	125	((guest same (fee or charge or surcharge or sur-charge or (sur adj charge)))) same (inn or motel or hotel)	USPAT	2002/05/23 15:15
7	65	((((guest same (fee or charge or surcharge or sur-charge or (sur adj charge)))) same (inn or motel or hotel)) and ((telephone or phone) with us\$4)	USPAT	2002/05/23 15:25

L Number	Hits	Search Text	DB	Time stamp
1	33	(hotel or motel) same ((telephone or phone) with (fee or activat\$4))	USPAT	2002/05/23 12:56
2	87	(hotel or motel) same ((telephone or phone) with (charge or (sur adj charge) or surcharge or sur-charge))	USPAT	2002/05/23 13:25
3	26	(hotel or motel) same ((telephone or phone) with (charge or (sur adj charge) or surcharge or sur-charge))	EPO; JPO; DERWENT; IBM_TDB	2002/05/23 13:27
4	5326	(telephone or phone) same (surcharge or sur-charge or (sur adj charge) or fee or bill\$3)	USPAT	2002/05/23 13:38
5	187	((telephone or phone) same (surcharge or sur-charge or (sur adj charge) or fee or bill\$3)) same (hotel or motel or inn or restaurant)	USPAT	2002/05/23 14:27
6	698	(telephone or phone) with (fee or sur-charge or surcharge or (sur adj charge))	USPAT	2002/05/23 14:35
7	23	((telephone or phone) with (fee or sur-charge or surcharge or (sur adj charge))) same (motel or hotel or pbx or apbx)	USPAT	2002/05/23 14:29
8	2	((telephone or phone) with (fee or sur-charge or surcharge or (sur adj charge))) same pabx	USPAT	2002/05/23 14:34
9	133	(motel or hotel or inn) and ((telephone or phone) same (fee or sur-charge or surcharge or (sur adj charge)))	USPAT	2002/05/23 14:38

DOCUMENT-IDENTIFIER: US 5978459 A
TITLE: Encryption of telephone calling card codes

----- KWIC -----

BSPR:

Today, calling card customers originating calls from typical public facilities need not deposit even a single coin. The process of making calls using a calling card includes entering an account number and a personal identification number or "PIN" into a telephone key pad device. This enables a calling card customer to make one or more calls from that location. Charges for those calls are subsequently billed to the customer's calling card account. Calling cards can also be used to avoid having to pay additional surcharges when making calls from certain public facilities such as hotels or the like.

DEPR:

For example, a Voice Recognition Unit (VRU) may be involved in the access code collection process. A VRU uses voice recognition techniques to recognize and accept voice input data from calling card customers when processing calling card telephone calls. Similarly, clear-text access codes are often collected manually by human operators. Therefore, the telecommunication switch 106 depicted in FIG. 1, is only an example of a device that functions to collect clear-text access codes from calling card customers, and should not be construed as a limitation of the present invention. Consequently, switch 106 is hereinafter referred to as an "access code collection device". The access code collection device 106 represents the aforementioned examples and other telecommunication devices used to implement the calling card access code collection function as described herein.



US005631947A

United States Patent [19]

Wittstein et al.

[11] Patent Number: **5,631,947**[45] Date of Patent: **May 20, 1997**[54] **MOBILE TELEPHONE DEVICE FOR
STORING A PLURALITY OF CHANGABLE
CHARGE RATES AND TIME LIMIT DATA**[75] Inventors: Alan D. Wittstein, Westport; Giacomo
A. Ciocca, Thomaston, both of Conn.[73] Assignee: Megatrend Telecommunications, Inc.,
Bridgeport, Conn.

[21] Appl. No.: 373,509

[22] Filed: Jan. 17, 1995

Related U.S. Application Data[63] Continuation of Ser. No. 235,198, Apr. 29, 1994, abandoned,
which is a continuation of Ser. No. 673,140, Mar. 4, 1991,
abandoned.[51] Int. Cl.⁵ H04Q 7/20; H04Q 7/22;
H04Q 7/24[52] U.S. Cl. 379/59; 379/112; 379/114;
379/63; 379/58[58] Field of Search 379/58, 59, 61,
379/62, 63, 112, 114[56] **References Cited****U.S. PATENT DOCUMENTS**

3,581,019	5/1971	Ryan	379/63
4,118,687	10/1978	McWalew et al.	382/59
4,724,537	2/1988	Maret	379/58
4,731,818	3/1988	Clark, Jr. et al.	379/144
4,776,000	10/1988	Panietti	379/62
4,776,003	10/1988	Harris	379/91
4,777,646	10/1988	Harris	379/91
4,813,065	3/1989	Segala	379/112
4,831,647	5/1989	D'Avello et al.	379/91
4,845,740	7/1989	Tokuyama et al.	379/91
4,860,336	8/1989	D'Avello et al.	379/63
4,860,341	8/1989	D'Avello et al.	379/91
4,868,846	9/1989	Kemppi	379/144
4,920,562	4/1990	Hird et al.	379/132
4,935,956	6/1990	Hellwarth et al.	379/112
4,951,308	8/1990	Bishop et al.	379/91
4,965,821	10/1990	Bishop et al.	379/91
4,975,942	12/1990	Zebryk	379/144
4,992,517	2/1991	West, Jr. et al.	379/58

5,046,085	9/1991	Godsey et al.	379/112
5,109,401	4/1992	Hattori et al.	379/58
5,127,041	6/1992	O'Sullivan	379/59
5,134,651	7/1992	Ortiz et al.	379/112
5,138,650	8/1992	Stahl et al.	379/61
5,144,649	9/1992	Zicker et al.	379/59
5,233,642	8/1993	Renton	379/59

FOREIGN PATENT DOCUMENTS

0160149	12/1981	Japan	378/143
2016078	9/1992	WIPO	379/58

OTHER PUBLICATIONS*Mitel Applications Note MSAN120 MT 8880 ETMF Transceiver Applications, Jun. 1986.**Primary Examiner—William Cumming**Attorney, Agent, or Firm—Curtis, Morris & Safford, P.C.;
Gregor N. Neff, Esq.*[57] **ABSTRACT**

The mobile telephone is well adapted for use as a rental phone. It has an on-board computer which computes and stores telephone usage and control information such as charges for usage of the telephone. Time and charge limits can be set for the telephone. For example, the telephone can be set to disable itself for all or a selected category of incoming and outgoing calls after the passage of a pre-determined time, and/or when the total usage charges reach a pre-determined maximum. Preferably, these limits can be set and adjusted remotely. The telephone is valuable for use in rental vehicles. The telephone is adapted to deliver its stored information when called and interrogated by use of a computer at a station when the rental vehicle is returned. The telephone can be checked-out and enabled, and the time and charge limits adjusted, all from the same remote station. The telephone also is particularly valuable in other types of rentals, such as in a hotel or motel where the mobile telephone is housed in a portable briefcase or carrying case. The time and charge limits are enforced automatically, and can be changed remotely, as with other versions of the telephone device. Features also are provided to block unwanted calls intended for a prior renter of the phone; to give charge credits for "dropped calls"; and for selectively locking the phone to prevent unauthorized use for all but emergency calls, data transmission and similar calls.

23 Claims, 6 Drawing Sheets